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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,828	07/21/2003	Jeffrey S. Smith	2002B167A	5770

23455 7590 10/06/2005

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EXAMINER

MAYEKAR, KISHOR

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/623,828

Applicant(s)

SMITH ET AL.

Examiner

Kishor Mayekar

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 17-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 22-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-16 and 22-38, drawn to a process for controlling flow of solid catalyst particles, classified in class 204, subclass 164.
 - II. Claims 17-21, drawn to a gas-solid reactor system for controlling electrical charges between flowing solid particles and conductive surfaces in a gas solids reactor, classified in class 422, subclass 186.04.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Groups I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to generate catalyst by electrical resistive.

3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Attorney Frank Reid on September 27, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-16 and 22-38. Affirmation of this election must be made by applicant in replying to this Office action. Claims 17-21 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-8, 11-16, 22-29 and 31-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fulks et al. (US 4,532,311) in view of either Bickford et al. (US 4,779,163) or Katz (US 3,304,249). Fulks' invention is directed to a process for reducing sheeting during polymerization of alpha-olefins by maintaining static electric charge in a fluid bed reactor at the site of possible sheet formation below static voltage levels which would otherwise cause sheet formation (paragraph crossing cols. 5 and 6). Fulks also discloses "the static voltage can be reduced by a variety of techniques such as treating the reactor surface to reduce static electric generation, by injection of an antistatic agent to increase particle discharging, by installation of appropriate devices connected to the reactor walls which are designed to promote electrical discharging by creating areas of high

localized field strength, and by neutralization of charges by the injection or creation of ion pairs, ions or charged particles of the opposite polarity from the resin bed" (col. 5, lines 8-22). And in col. 9, lines 33-47, "the art teaches various processes whereby static voltage can be reduced or eliminated. These comprise (1) reducing the rate of charge generation, (2) increasing the rate of discharge of electrical charge, and (3) neutralization of electrical charge. Some processes suited for use in a fluidized bed comprise (1) use of an additive to increase the conductivity of the particles thus providing a path for discharging, (2) installation of grounding devices in a fluidized bed to provide additional area for discharging electrostatic charges to ground, (3) ionization of gas or particles by electrical discharge to generate ions to neutralize electrostatic charges on the particles, and (4) the use of radioactive sources to produce radiation that will create ions to neutralize electrostatic charges on the particles".

Fulks discloses that the process comprises the recited step of flowing (see sole Figure). The difference between Fulks and the above claims is the provision of the recited step of controlling electrical charges. Bickford, a reference cited by Applicant, shows in a method for controlling electrostatic charges in fluidized bed the electrical grounding of the fluidized bed by grounding the fluidized bed

walls (see abstract and Fig. 2). Katz shows in a method of stabilizing a fluidized bed using a corona discharge by generating an electric field between at least two spaced electrodes to ionize particles (col. 2, lines 34-51). In light of Fulks discloses that it is known to control electrical charges between the flowing solid catalyst particles and the opposite conductive surfaces in the fluid bed reactor by the installation of grounding devices in the fluidized bed or by ionizing particles by electrical discharge to generate ions to neutralize electrostatic charges on the particles, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Fulks' teachings as shown by either Bickford or Katz because this would result in controlling electrical charges between the flowing solid catalyst particles and the opposing conductive surfaces. As to the limitation "to move the particles away from the conductive surfaces", it would be inherent in the controlling step when grounding the fluidized bed or ionizing the particles (see col. 9, lines 11-19).

As to the selection of voltage, flow velocity and mass ratio as claimed in claims 4-6 and 14-16, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings because it has been settled that proper adjustment of a

known effective variable of a known or obvious process is within the capabilities of one having ordinary skill in the art. *In re Aller* 105 USPQ 233; *In re Boesch* 205 USPQ 215.

As to the subject matter of claim 8, Fulks discloses it in col. 6, lines 43-48.

As to the subject matter of claims 11-13, as Fulks discloses that catalyst contains molecular sieves as the inert carrier material (paragraph crossing cols. 3 and 4), the selection of any of known equivalent processes with a different catalyst would have been within the level of ordinary skill in the art. Further, it has been held that the substitution of one known equivalent technique for another may be obvious even if the prior art does not expressly suggests the substitution. *Ex parte Novak* 16 USPQ 2041; *In re Leshin* 125 USPQ 416; *Lyon v. Bausch & Lomb* 106 USPQ 1; *Graver Tank & manufacturing Co. v. Linde Air Products Co.* 85 USPQ 328.

As to the further difference between Fulks and claims 22-29 and 32-38, the provision of a conductive surface internal to the inner surface, since Fulks discloses that it is known to control electrical charges between the flowing solid catalyst particles and the opposing conductive surfaces by ionizing particles by electrical discharge to generate ions to neutralize electrostatic charges on the

particles and since Bickford shows the provision of a conductive surface internal to the reactor wall or Katz shows the provision of at least two spaced electrodes for applying an electrical field to ionize the particles, the provision of an electrode opposed to the reactor housing and inside the housing for the application of an electrical discharge to ionize particles in Fulks would have been within the level of ordinary skill in the art. Further, it has been held that the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have, *In re Newell* 13 USPQ 2d 1248, *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552.

8. Claims 9, 10, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fulks '311 as modified by either Bickford '163 or Katz '249 as applied to claims 1-8, 11-16, 22-29 and 32-38 above, and further in view of Goode et al. (US 4,803,251). The difference between the references as applied above and the instant claims is the gas being methanol. Goode shows in a method for reducing sheeting during polymerization of alpha-olefins the use of an additive gas of methanol to neutralize the charges in the reactor (paragraph crossing cols. 10 and 11). The subject matter as a whole would have been obvious to one having

ordinary skill in the art at the time the invention was made to have modified the references' teachings as suggested by Goode because this would further controlling the electrical charges.

Double Patenting

9. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

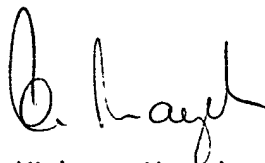
A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

10. Claims 1-16 and 22-37 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-16 and 21-36 of copending Application No. 10/313,253. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kishor Mayekar
Primary Examiner
Art Unit 1753